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EXAMINER				
ZETTL, MARY E				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary****Application No.**

10/553,934

**Applicant(s)**

PLATT, TERENCE CHRISTOPHER

**Examiner**

MARY ZETTL

**Art Unit**

2875

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12/10/2008.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 31-50 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 31-50 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 20 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/5508)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claim 50 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. A multi-color diode is not mentioned in the specification.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 31-33, 44, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gray (US 4,794,248 A) in view of Masotti (WO 07/77447 A1).

Regarding claim 31, Gray teaches an edge device for a powered door, comprising an elongate array of infrared transmitter and/or receiver elements (13 and 23; col. 2, lines 54-65, any sensor, i.e. receiver, that is sensitive to the radiation of the emitters), and an array of illuminable elements (12 and 22).

Gray does not disclose expressly each illuminable element being itself elongated in the direction of elongation of the array, and subsequently the illuminable elements being arranged substantially end-to-end.

Masotti teaches a detection apparatus including the use of an elongated light source (1).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have made the illumination sources of Gray elongated as taught by Masotti for the purpose of covering more surface with the illumination source.

Gray does not disclose expressly the array of illumination sources being illuminated when the door is open so as to be visible to persons approaching the door. Masotti teaches an infrared transmitter and/or receiver element (page 12, line 30) for detection purposes (detect an intruder, page 13, line 10).

Masotti also teaches the optical source may be used independently of the optical receiver such to meet specific lighting requirements (page 13, lines 12-16). While Masotti does not specify the presence of an optical source for lighting purposes together with an infrared transmitter and/or receiver it is inferred by the examiner that one of ordinary skill in the art would be motivated to utilize the teachings of Masotti to have both an IR transmitter and/or receiver element and to have an illumination source since Masotti already teaches the use of these components separately.

At the time the invention was made, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have modified the

invention of Gray such that the illumination source was visible to people as taught by Masotti so as to guide people in dimly lit conditions.

Regarding claim 32, Gray teaches infrared elements (13 and 23, receivers) and illuminable elements (12 and 22) being disposed in a common carrier structure (the door, 10 or 20).

Regarding claim 33, Gray teaches an edge device for a powered door, comprising an elongate array of infrared transmitter and/or receiver elements (13 and 23; col. 2, lines 54-65, any sensor, i.e. receiver, that is sensitive to the radiation of the emitters), and an array of illuminable elements (12 and 22); the infrared elements (13 and 23, receivers) and illuminable elements (12 and 22) being disposed in a common carrier structure (the door, 10 or 20).

Gray does not disclose expressly each illuminable element being itself elongated in the direction of elongation of the array, and subsequently the illuminable elements being arranged substantially end-to-end.

Masotti teaches a detection apparatus including the use of an elongated light source (1).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have made the illumination sources of Gray elongated as taught by Masotti for the purpose of covering more surface with the illumination source.

Gray does not disclose expressly the array of illumination sources being illuminated when the door is open so as to be visible to persons approaching the door.

Masotti teaches an infrared transmitter and/or receiver element (page 12, line 30) for detection purposes (detect an intruder, page 13, line 10). Masotti also teaches the optical source may be used independently of the optical receiver such to meet specific lighting requirements (page 13, lines 12-16). While Masotti does not specify the presence of an optical source for lighting purposes together with an infrared transmitter and/or receiver it is inferred by the examiner that one of ordinary skill in the art would be motivated to utilize the teachings of Masotti to have both an IR transmitter and/or receiver element and to have an illumination source.

At the time the invention was made, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have modified the invention of Gray such that the illumination source was visible to people as taught by Masotti so as to guide people in dimly lit conditions.

Regarding claims 44 and 45, Gray teaches the edge device being configured for use on an elevator door (col. 2, line 40).

3. Claims 34-38, are rejected under 35 U.S.C. 103(a) as being unpatentable over Gray (US 4,794,248 A) and Masotti (WO 007/77447 A1 ) and further in view of Picado (US 5,149,921 A).

Regarding claims 34 and 35, Gray and Masotti do not disclose expressly the common carrier structure being a channel member. Picado teaches an infrared intrusion detection system including a common carrier structure (64; Figure 4A) for emitters and receivers (col. 8, lines 38-65) that is a channel member (Figure 4A).

At the time, the invention was made, it would have been obvious to one of ordinary skill in the art to have modified the invention of Gray and Masotti such that the common carrier structure was a channel member as taught by Picado so as to offer additional protection to the illuminating elements and the transmitters/receivers. Regarding claim 36, Gray teaches the at least one illuminable element (12 and 22) being a series of illuminable elements (Figure 1).

Regarding claim 37, Gray, Masotti, and Picado do not disclose expressly the infrared elements being vertically interleaved with the series of illuminable elements along the length of the array, each adjacent pair of the illuminable elements being separated by a respective infrared element.

Shifting the location of an element would not have modified the operation of the device. In re Japkse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950). It would have been obvious to one of ordinary skill in the art at the time the invention was made to rearrange the illuminable elements and the respective infrared elements of Gray, Masotti, and Picado, since it has been held that a mere rearrangement of an element without modification of the operation of the device involves only routine skill in the art. One would have been motivated to rearrange the illuminable elements and the

respective infrared elements so as to cover more detection array and thus create a more effective and safer device.

Regarding claim 38, Gray teaches the infrared elements (13) extend vertically on a first side of the device, and the series of illuminable elements (12) also extend vertically. Gray, Masotti, and Picado do not disclose expressly the transmitters and/or receivers extending vertically alongside the illuminable elements on a second side of the device.

The particular placement of an element was held to be obvious. In *re Kuhle*, 526 F. 2d 553, 188 USPQ7 (CCPA 1975). It would have been obvious to one of ordinary skill in the art at the time the invention was made to rearrange expressly the transmitters and/or receivers of Gray, Masotti, and Picado, such that they extended vertically alongside the illuminable elements on a second side of the device, since it has been held that a mere rearrangement of an element without modification of the operation of the device involves only routine skill in the art. One would have been motivated to rearrange the transmitters and/or receivers and the illuminable elements for the purpose of providing a detection zone that covers a greater vertical length and leaves little area that is not being used for detection purposes.

4. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gray (US 4,794,248 A), Masotti (WO 007/77447 A1), and Picado (US 5,149,921 A), and further in view of Boiucaner (US 5,142,152 A).

Regarding claim 39, Gray and Masotti do not disclose expressly the common carrier structure being a channel member. Picado teaches an infrared intrusion detection system including a common carrier structure (64; Figure 4A) for emitters and receivers (col. 8, lines 38-65) that is a channel member (Figure 4A).

At the time, the invention was made, it would have been obvious to one of ordinary skill in the art to have modified the invention of Gray and Masotti such that the common carrier structure was a channel member as taught by Picado so as to offer additional protection to the illuminating elements and the transmitters/receivers.

Gray teaches the infrared elements (13) and the illuminable elements (12) extending vertically (vertically).

Gray, Masotti, and Picado do not disclose expressly a barrier member. Boiucaner teaches a sliding door sensor including a barrier member (col. 2, lines 62-65) that is interposed between illuminable elements (25, IR emitters; col. 2, lines 50-54) and infrared elements (IR receivers, 26; col. 4, lines 62-65).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to have modified the invention of Gray, Masotti, and Picado by utilizing a barrier member between illuminable elements and infrared elements as taught by Boiucaner in order to avoid interference which may result in a trigger not being detected or a false trigger being detected.

Gray, Masotti, Picado, and Boiucaner do not disclose expressly the illuminable elements and the infrared elements extending alongside each other. The particular placement of an element was held to be obvious. In re Kuhle, 526 F. 2d 553, 188

USPQ7 (CCPA 1975). It would have been obvious to one of ordinary skill in the art at the time the invention was made to rearrange the illuminable elements and the infrared elements of Gray, Masotti, Picado, and Boiucaner since it has been held that a mere rearrangement of an element without modification of the operation of the device involves only routine skill in the art. One would have been motivated to rearrange the illuminable elements and the infrared elements for the purpose of producing a detection zone that covers a greater vertical length and leaves little area that is not being used for detection purposes. 5.

5. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gray (US 4,794,248 A) and Masotti (WO 007/77447 A1) and further in view of Reynolds et al. (US 2006/0243740 A1).

Regarding claim 40, Gray and Masotti do not disclose expressly the at least one illuminable element including circuitry that is positioned so as to be isolated against interference from circuitry utilized by the infrared transmitter elements.

Reynolds et al. teaches a device including an infrared sensor (42); and associated circuitry that is isolated against interference from other circuitry (paragraph 57).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to have modified the invention of Gray and Masotti such that the circuitry was isolated against interference from other circuitry as taught by Reynolds et al. in order to avoid a false trigger or avoid missing an actual trigger.

Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gray (US 4,794,248 A), Masotti (WO 007/77447 A1), and Picado (US 5,149,921 A) and further in view of Nakamori (EP 08259156).

Regarding claim 41, Gray, Masotti, and Picado, do not disclose expressly drive circuitry configured to cause some of the at least one illuminable elements to flash as an indication that the door is closing or is about to close.

Nakamori (EP 08259156) teaches an elevator including drive circuitry (not explicitly stated, but some type of circuitry must be driving the flashing) configured to cause at least one illuminable elements to flash as an indication that the door is about to close (Constitution of the Abstract).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to have modified the invention of Gray, Masotti, and Picado such that flashing of the illuminable elements as taught by Nakamori was provided for the purpose of visually warning a user of danger.

Claims 42 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gray (US 4,794,248 A) and Masotti (WO 007/77447 A1) and further in view of McDermott (US 5,161,879 A).

Regarding claims 42 and 43, Gray and Masotti do not disclose expressly one or more of the illuminable elements comprising a length of electroluminescent wire.

McDermott teaches a flashlight and further teaches the LED light source (63) being replaceable with an electroluminescent type (col. 10, line 68).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to have modified the invention of Gray and Masotti such that the one of more illuminable elements was electroluminescent as taught by McDermott since it is well known that that electroluminescent light sources are easily substituted for LEDs and may be used for specific applications.

6. Claims 46-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gray (US 4,794,248 A) in view of Trett (US 5,420,430 A).

Regarding claim 46, Gray teaches an edge-device illuminable element comprising: at least one localised source of light (12 and 22) and a light-emitting surface (surface of source that light exits out of).

Gray does not disclose expressly each illuminable element being itself elongated in the direction of elongation of the array, and subsequently the illuminable elements being arranged substantially end-to-end. Masotti teaches a detection apparatus including the use of an elongated light source (1).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have made the illumination sources of Gray elongated as taught by Masotti for the purpose of covering more surface with the illumination source.

Gray does not disclose expressly a light-spreading lens and a light diffuser for diffusing the spread light.

Trett teaches a detection system for detecting obstruction in doorways including an infrared emitter (2) and an infrared detector (8) and further teaches a light-spreading lens and a diffuser (col. 4, lines 48-50).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to have modified the invention of Gray such that a light-spreading lens and a diffuser as taught by Trett were including for the purpose of creating a more uniform spread of light.

Gray and Trett do not disclose expressly the light-spreading lens in one axis being cylindrical with an elliptical outer curvature and an inner curvature such that light is constrained to leave the lens with a generally equal light intensity at all points on the outer curvature.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the shape of the light-spreading lens of Gray and Trett, since it has been held that a mere change in shape of an element is generally recognized as being within the level of ordinary skill in the art when the change in shape is not significant to the function of the combination. Further, one would have been motivated to select the shape of a cylinder with an elliptical outer curvature for the purpose of creating a uniform light output, the uniformity aids in more accurate detection of triggers. See *In re Dailey*, 357 F. 2d 669, 149 USPQ 47 (CCPA 1966).

Regarding claim 47, Gray and Trett do not disclose expressly the inner curvature having an eccentricity of unity or greater.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have made the inner curvature have an eccentricity of unity or greater, since it has been held that a mere change in shape of an element is generally recognized as being within the level of ordinary skill in the art when the change in shape is not significant to the function of the combination. Further, one would have been motivated to select the shape having an eccentricity of unity or greater for the purpose of desired light output characteristics. See *In re Dailey*, 357 F. 2d 669, 149 USPQ 47 (CCPA 1966).

Regarding claim 48, Gray and Trett do not disclose expressly the inner curvature having a parabolic shape.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have made the inner curvature have a parabolic shape, since it has been held that a mere change in shape of an element is generally recognized as being within the level of ordinary skill in the art when the change in shape is not significant to the function of the combination. Further, one would have been motivated to select the shape of a parabola for the purpose of desired light output characteristics. See *In re Dailey*, 357 F. 2d 669, 149 USPQ 47 (CCPA 1966).

Regarding claim 49, Gray teaches a source of light being an LED (col. 2, lines 54-60).

Regarding claim 50, Gray and Trett do not disclose expressly the source of light being a multi-colored diode.

According to *In re Seid*, 161 F.2d 229, 73 USPQ 431 (CCPA 1947) matters relating to ornamentation only which have no mechanical function cannot be relied upon to patentably distinguish the claimed invention from the prior art.

### ***Response to Arguments***

7. Applicant's arguments filed 12/10/2008 have been fully considered but they are not persuasive.

On page 6, the applicant has argued near the bottom of the page that "Gray only discloses the use of a single emitting and sensing device at a time. This is structurally very different than the claimed invention which calls for both transmitter and/receiver elements and an array of illuminable elements. Before commenting on the merits of this argument the examiner notes that claim 31 recites "infrared transmitter **and/or** receiver elements."

On page 8, the applicant "respectfully disagrees with the inference made in the Office Action, especially in view of the fact that each of the cited references only discloses the use of one technology and not two as claimed in currently amended independent claim 31. The examiner disagrees with this statement and maintains that

adding a light source to an existing infrared transmitter and/or receiver element application is not novel, especially when Masotti teaches the use of a light source in a different embodiment.

On the top of page 10 the applicant has argued that the "disclosure of Gray is clear in that component 13 is a sensor sensitive to the radiation of emitter." It is noted that claim 38 calls for "infrared elements" and "illuminable elements." The applicant has not specified whether these elements themselves are emitting infrared rays and illumination rays or whether they are sensing infrared and illumination rays. Therefore, the examiner has applied the broadest reasonable interpretation and inferred that an "infrared element" may correspond to an element sensing infrared or an element emitting infrared rays and the "illuminable element" may correspond to an element that is itself emitting illumination or that is being illuminated by another object.

In the middle of page 10, the applicant has argued that Boiucaner teaches away from the claimed invention. It is noted that the "prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such a disclosure does not criticize, discredit, or otherwise discourage the solution claimed..." *In re Fulton*, 391 F.3d 1195, 1201, 73 USPQ2d 1141, 1146 (Fed. Cir. 2004).

On page 11, the applicant has argued that Reynolds et al. is non-analogous art. The examiner respectfully disagrees and points out that since both inventions involve infrared sensors both must also deal with interference problems and therefore, one of

ordinary skill in the art would be motivated to have looked to a reference teaching means to deal with interference problems to solve the same problem.

On pages 11 and 12, the applicant has argued that Trett teaches away from the claimed invention. It is noted that the "prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such a disclosure does not criticize, discredit, or otherwise discourage the solution claimed..." *In re Fulton*, 391 F.3d 1195, 1201, 73 USPQ2d 1141, 1146 (Fed. Cir. 2004).

### ***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary Zettl whose telephone number is 571-272-6007. The examiner can normally be reached on M-F 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandy O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MZ

/Mary Zettl/

/Sharon E. Payne/

Primary Examiner, Art Unit 2875